

REMARKS

Status of the Claims

Claims 1-9 are pending. Claim 1 is amended. Claims 11-20 are newly added. Claim 10 is canceled without prejudice or disclaimer. Support for the amendments may be found throughout the application as originally filed. *See, e.g.*, Specification, ¶¶ [0038], [0056], [0057]; original claims 3-9.¹ No new matter is added. Applicants reserve the right to file a continuation or divisional patent application drawn to canceled subject matter.

Claim 2 is withdrawn as “being drawn to a non-elected invention, there being no allowable generic or linking claim.”² Claim 2, however, depends from claim 1—i.e., claim 2 is encompassed within the elected invention. Accordingly, Applicants respectfully request that claim 2 and claims 11-18, which depend from claim 2, be examined with claims 1 and 3-9.³

Formalities

Applicants greatly appreciate the Examiner’s indication that (1) the Sequence Listing, Computer Readable Form (CRF), and statement that the Sequence Listing and CRF are identical have been received; (2) the Declaration is compliant; (3) the Information Disclosure Statements have been considered; and (4) the instant application has been granted the benefit of JP 2004-085393.

Specification

The Examiner objects to the specification’s purported use of embedded hyperlinks and/or other forms of browser-executable code on page 5, line 23 and page 24, line 35.

Applicants respectfully submit that these passages do not contain embedded hyperlinks and/or other forms of browser-executable code. Indeed, this application has already been published and the electronic version of the application does not contain a live web link. Accordingly, Applicants respectfully request withdrawal of this objection.

¹ These and other specification citations refer to US 2007/0155013—the publication of the instant application.

² *See* Office Action, page 2.

³ In the event the Examiner maintains that claim 2 is drawn to a non-elected invention, Applicants respectfully request rejoinder of claim 2 and 11-18, if claim 1 is allowable.

Claim Rejections—35 U.S.C. § 112, 2nd Paragraph

Claims 3 and 8-10 are rejected for depending on a claim 2. Claims 3 and 8-10, as amended, depend only from claim 1. Accordingly, this rejection is moot.

Claim Rejections—35 U.S.C. § 102(b)

Claims 1 and 3-10 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Nagaoka et al. (2002) (“Nagaoka 1”) and as evidenced by Nagaoka et al. (2003) (“Nagaoka 2”).

Applicants respectfully traverse.

A. Nagaoka 1 and 2 Do Not Teach Pluripotent Stem Cells

The claims are directed to methods of augmenting the proliferation potency of pluripotent stem cells. The specification defines pluripotent stem cells as “having the capacity to differentiate into all three germ layers (ectoderm, mesoderm and endoderm) under the appropriate conditions.”⁴

Neither Nagaoka 1 nor Nagaoka 2 teaches pluripotent stem cells. Rather, these references disclose F9 teratocarcinoma cells. F9 cells do not have the capacity to differentiate into all three germ layers. Indeed, as discussed in the Specification, F9 cells only differentiate into endodermal cells: “[m]oreover, whereas ES cells have triploblast differentiating potential to all three germ layers, the differentiation of F9 cells is limited to endodermal cells, and they are unable to form chimeras.”⁵ Accordingly, because Nagaoka 1 nor Nagaoka 2 do not teach pluripotent stem cells, the references do not anticipate any of the claims.

B. Nagaoka 1 and 2 Do Not Teach Augmenting The Proliferation Potency Of Pluripotent Stem Cells

The claims are directed to methods of augmenting proliferation potency. Neither Nagaoka 1 nor Nagaoka 2 teaches augmenting proliferation potency. Indeed, the Specification compares Nagaoka 1 and an embodiment of the claims, concluding that proliferation potency was not augmented in Nagaoka 1:

As mentioned above, the present inventors have succeeded in culturing F9 cells, an embryonal carcinoma cell line, without colony formation, i.e., in a dispersed state. When a cell culturing plate which had E-cadherin immobilized or coated on a solid phase surface (E-cad plate) was prepared and F9 cells were seeded on the plate, the F9 cells exhibited a dispersed cell morphology without colony formation. *The*

⁴ Specification, ¶ [0072].

⁵ Specification, ¶ [0021].

proliferation potency was essentially the same for F9 cells cultured on the E-cad plate and F9 cells cultured on an ordinary plate.

When it was attempted to seed ES cells on an E-cad plate, virtually all of the cells adhered to the plate, and they exhibited a dispersed cell morphology without colony formation, similar to F9 cells. ***Most notably, the proliferation potency of ES cells seeded on the E-cad plate under these culturing conditions was significantly higher than the proliferation potency of ES cells cultured on an ordinary plate.***⁶

Accordingly, because Nagaoka 1 and Nagaoka 2 do not teach augmenting proliferation potency, the references do not anticipate any of the claims.

In view of the foregoing, Applicants respectfully request withdrawal of this rejection.

Claim 10 stands rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Amit et al. (2000). Claim 10 has been canceled, thereby rendering this rejection moot.

⁶ Specification, ¶¶ [0040] and [0041]; *see also* Example 3 (“... the number of ES cells cultured on the E-cad-Fc plate with respect to the number of ES cells cultured on the gelatin plate by day 3 of culturing was significantly higher for both the EB3 and R1 cell lines (see FIG. 3A). ... ***When the same experiment was conducted with F9 cells, no difference was found in the cell proliferation potencies of the E-cad-Fc plate cultured group and the ordinary plate cultured group.***”)

CONCLUSION

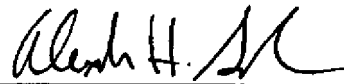
In view of the foregoing, Applicants respectfully request an indication of allowance of all claims. If the Examiner has any questions relating to this response, or the application in general, he is respectfully requested to contact the undersigned so that prosecution of this application may be expedited.

Respectfully submitted,

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